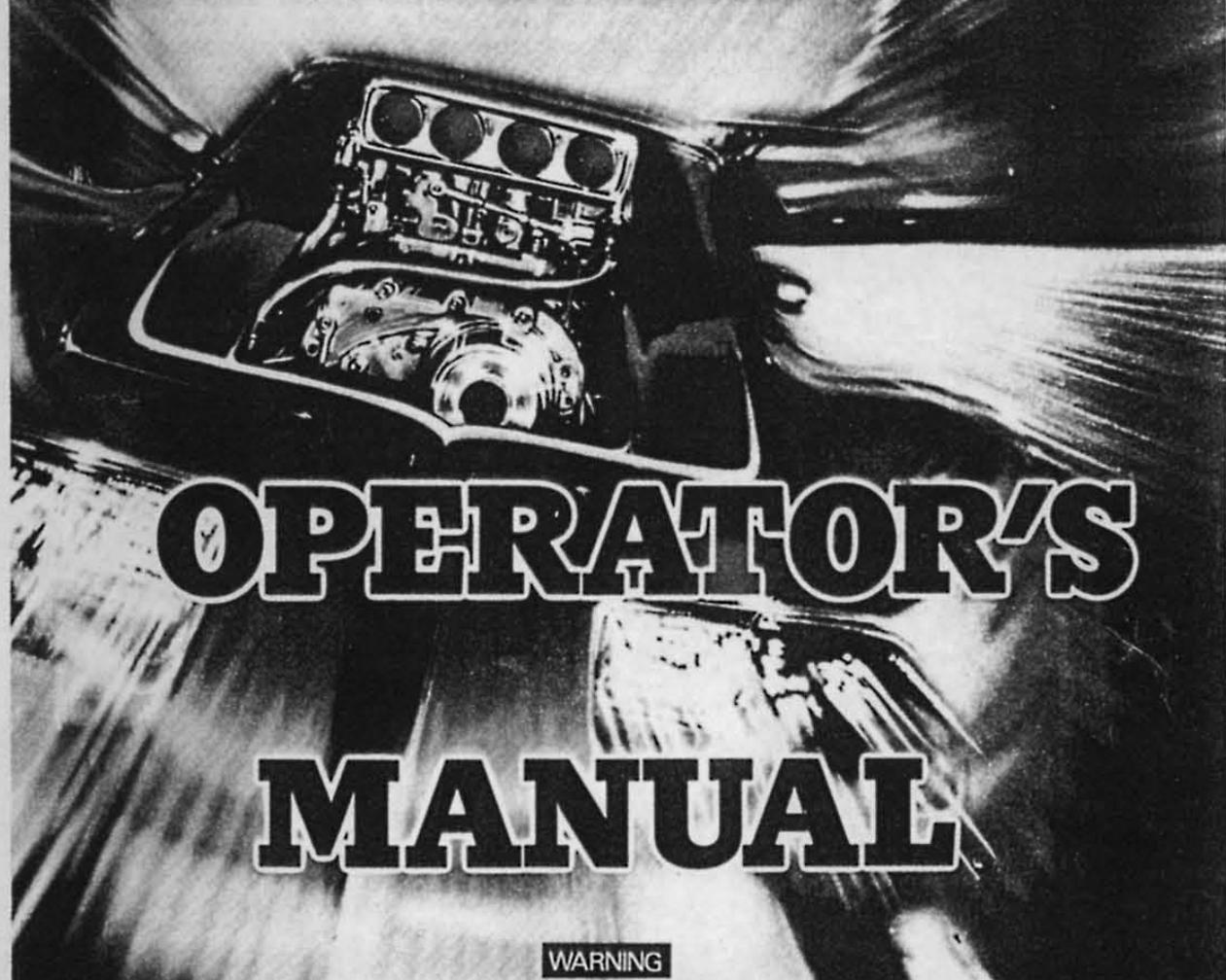




OVER DRIVE™

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A black and white photograph of a racing car's engine compartment, showing a complex arrangement of cylinders, pipes, and mechanical parts. The image is blurred to suggest high speed.

OPERATOR'S MANUAL

WARNING

「OVER DRIVE」 is an original game developed by KONAMI Industry Co., Ltd.. KONAMI Industry Co., Ltd. reserves all the copyrights, trademarks and other industrial property rights with respect to this game.

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Technical Information

(1) Required power capacity

- GND-Vcc 5V 8A or more
- * Check voltage on the edge connector of the PCB and make sure it shows +5.0 volts.
- GND-(+12V), GND-(+24V)
- * See the Wiring Diagram.

(2) Output

- R(red) analog positive
- G(green) analog positive
- B(blue) analog positive
- SYNC HV complexed TTL level, negative

(3) Use the volume knob on the PCB to adjust sound level. Turn clockwise for increased loudness.



(4) Handle with care.

Play Instruction

- Deposit coins and press start button.
- Turn steering wheel to select music. Press start button or accelerator to start.
- Drive your car along the course and pass through the checkpoints within the time given for extended play.
- Remaining time is added to your score as bonus points.

Cabinet Information

Use a cabinet with a vertical monitor, a volume-controlled steering wheel, an accelerator, a brake pedal, a shift lever (LOW/HIGH) and a light switch for start. It is recommended that a service switch and a test switch should also be equipped.

(1) DIGITAL INPUT

- ACCELERATOR... Accelerator is effective when the switch is ON.
- BRAKE PEDAL... Brake is effective when the switch is ON.
- SHIFT LEVER... OFF: LOW, ON: HIGH

(2) ANALOG INPUT

STEERING WHEEL VOLUME

Use a volume with resistance value between $1k\Omega$ and $5k\Omega$, directly proportional to the turning degree. The volume level should show the following figures in the test mode.

Neutral position: between 70H and 8FH

Fully clockwise from neutral position (approximately 140 degree): B8H or more

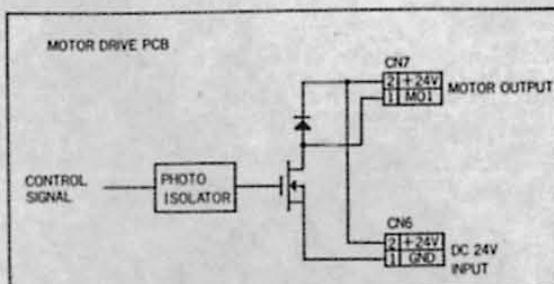
Fully counterclockwise from neutral position (approx. 140 degree): 48H or less

(3) LIGHT SWITCH

Use a switch with the light of DC 12V, consuming electricity 150mA or less.

(4) STEERING VIBRATION FUNCTION

This function vibrates the steering wheel when the car is starting, or slipping on a curve, using a DC motor and a mechanism utilizing its revolution for vibration.

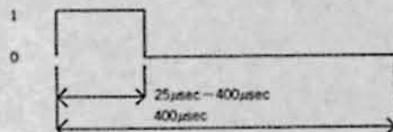


a. DC motor specifications

- Voltage: +24V
- Current capacity: 2.5A or less

b. Vibration signal timing

The motor rotating speed changes in accordance with the volume of electric current on the DC motor, which is changeable by controlling the pulse width of the control signal from the hardware.



Self Test

Memory check starts automatically when powering on.

NORMAL: "ALL MEMORY OK" and "ROM CHECK OK" will be displayed. Then the game will be playable.

ABNORMAL: When memory is wrong, "MEMORY BAD" or "SOUND MEMORY BAD" will be displayed. When something is wrong with ROMs, "BAD" will show which ROMs are faulty. Self test repeats itself when abnormal.

VOLUME ERROR: Do not touch steering wheel during self test as it is returned to the neutral position when powering on.

The volume level of the neutral position should be between 70H and 8FH ($80H \pm 0FH$).

If the level is out of this range, "VOLUME ERROR" and the volume level will be displayed. Adjust it to a normal level and power off/on again.

Manual Test

(1) How to start

Press TEST SWITCH inside the cabinet.

(2) Test items

Following are the pages of TEST MODE. Press TEST SWITCH to go on to the next page.

1. ROM CHECK
2. SCREEN CHECK
3. COLOR CHECK
4. CONTROL READ CHECK
5. SOUND CHECK
6. DIPSWITCH CHECK
7. LAMP CHECK
8. OPERATION CHECK
9. RECORD CHECK
10. MODE CHANGE

(3) How to return to game mode

Select GAME MODE at the MODE CHANGE page. Use START SWITCH to select and press TEST SWITCH.

(4) Operation of each check item

① ROM CHECK

- "NOW CHECKING" ... ROMs are being checked.
- "MASK ROM OK" ... All the character and sound D/A ROMs are OK.
- "MASK ROM BAD" ... Check-sums of all the ROMs are displayed and faulty ROMs are shown as "BAD".

• Press TEST SWITCH for next check.

② SCREEN CHECK (Picture distortion)

- Adjust focus, alignment, size, etc. using the cross-hatch screen.
- Press TEST SWITCH for next check.

③ COLOR CHECK

- Adjust color brightness.
- Press TEST SWITCH for next check.

④ CONTROL READ CHECK

- Check gear lever, accelerator, brake pedal and all the switches to see "1" when switching ON.
- Adjust steering wheel volume level to show the figure 80H.
- Press TEST SWITCH for next check.

⑤ SOUND CHECK

- Turn steering wheel to call next sound code.
- Press TEST SWITCH for next check.

⑥ DIPSWITCH CHECK (Game set-up)

- This game does not utilize DIP SWITCHES as the other KONAMI games do. Game set-up can be done on this page.
- Set "MOTOR DRIVE" ON when using steering vibration.
- Press START BUTTON to move cursor on the screen and turn steering wheel to modify setting.
- Pressing SERVICE SWITCH resets all the settings of this page.
- Press TEST SWITCH for next check.

⑦ LAMP CHECK

- START SWITCH turns ON and OFF automatically.
- Press TEST SWITCH for next check.

⑧ OPERATION CHECK (Game statistics)

- This page displays playing time and the stage reached of the last 32 plays.
- Press SERVICE SWITCH to reset the data.
- Press TEST SWITCH for next check.

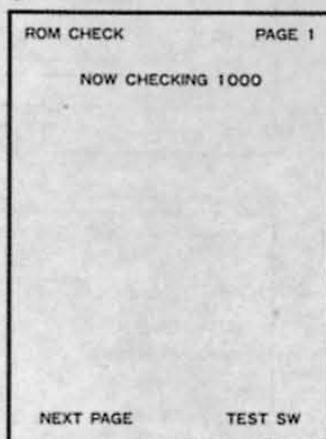
⑨ RECORD CHECK (Game record)

- This page shows the TOP 3 players' data: their initials, scores and the maximum speed achieved by each player.
- Use START SWITCH to move the cursor on the screen and press SERVICE SWITCH to reset the data.

⑩ MODE CHANGE

- Use START SWITCH to move cursor and press TEST SWITCH.
- If CHECK MODE is selected, the first page (ROM check) starts.
- If EEPROM INIT is selected, all the settings will be initialized to the exfactory settings.
- Pressing TEST SWITCH also returns to the first page.

① ROM CHECK



WIRING DIAGRAM

